



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
10/589,363	08/14/2006	Dan Pitulia	43318-232754	6823	
26694	7590	03/11/2008	EXAMINER		
VENABLE LLP P.O. BOX 34385 WASHINGTON, DC 20043-9998		HOPKINS, CHRISTINE D			
		ART UNIT		PAPER NUMBER	
		3735			
		MAIL DATE		DELIVERY MODE	
		03/11/2008		PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/589,363	PITULIA, DAN	
	Examiner	Art Unit	
	CHRISTINE D. HOPKINS	3735	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 07 December 2007.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-5 and 7-20 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) 12-20 is/are allowed.
 6) Claim(s) 1-5 and 7-11 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ . |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____. | 6) <input type="checkbox"/> Other: _____ . |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7 December 2007 has been entered. Claims 1-5 and 7-20 are now pending. The Examiner acknowledges the amendments to claims 1, 2, 7 and 12, as well as the addition of claims 13-20.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-5, 7-8 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Lenhardt et al. (U.S. Patent No. 5,047,994). Lenhardt et al. (hereinafter Lenhardt) disclose a bone conduction hearing device aided by a vibratory element for transmission of frequencies across the skull. Regarding claims 1-4, Lenhardt teaches a hearing aid **11** configured to receive sound, having a bone conduction attachment ("skin penetrating member") **12** which can be embedded in the skull (temporal bone) via a screw or simply attached to the head with a clamping arrangement or headband (col. 3,

lines 39-52 and col. 5, lines 26-33). A vibrator of the hearing aid applies vibrations to the skull for bone conduction at varying frequencies (col. 3, lines 39-52). Frequencies that are critical for noise detection, such as a “user’s voice” may be preferentially amplified (col. 4, lines 34-38), and signal processing on such sounds by the aid may include filters to reduce surrounding sounds (col. 5, lines 5-14) thus relieving problems associated with stuttering.

In view of claims 5 and 8, Lenhardt teaches an adjustable “delay circuit,” or the signal processing unit since the signal processing unit of Lenhardt amplifies and filters particular frequencies depending on the individual needs of a user. Some filters utilized will attenuate the signal, thus delaying its arrival to the other ear (col. 4, lines 26-51), which causes confusion and subsequently invokes stuttering.

Regarding claim 7, since Applicant fails to provide a description of the “directional microphone” of the instant application, the microphone of Lenhardt is determined to be capable of such since amplification of signals at particular frequencies allows the user to sense the direction, distance and speed of particular sounds (col. 6, lines 64-68).

With respect to claim 11, each ear of the user may receive sound information having different frequencies, such as speech embedded with background noise or the filtering of background noise such that reduction in unwanted sound occurs (col. 5, lines 5-14).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lenhardt et al. (U.S. Patent No. 5,047,994) in view of Rastatter et al. (U.S. Patent No. 5,961,443). Lenhardt et al. disclose the invention as claimed, see rejection supra; however Lenhardt fails to specifically teach a frequency shifting circuit. Although, Lenhardt indeed describes a frequency transposition section of the hearing aid (col. 3, lines 61-67). However a specific circuit for controlling such is not disclosed. Rastatter et al. (hereinafter Rastatter) teaches a device and method for ameliorating stuttering by providing an altered auditory feedback to a user. Regarding claims 9 and 10, Rastatter discloses a frequency shift circuit, used in conjunction with a delay circuit (col. 8, lines 27-37) (also as in the instant application) for returning a feedback signal to the user and for manipulating non-desireable signal distortions (col. 9, lines 27-37). Therefore, at the time of the invention it would have been obvious to one having ordinary skill in the art to have incorporated a frequency shifting circuit as suggested by Rastatter to a frequency transposition section of a hearing aid as taught by Lenhardt for enabling desired feedback to a user.

Allowable Subject Matter

6. Claims 12-20 are allowable over the prior art of record. The following is a statement of reasons for the indication of allowable subject matter: regarding claim 12, the prior art of record does not teach or fairly suggest receiving sound with a bone conducting hearing aid apparatus attached to a skull bone of a user, processing the sound to amplify the sound and feedback to the user and mechanically transmitting the processed sound to both inner ears of the user via the skull bone with a tactile component comprising a vibrator to treat stuttering.

Response to Arguments

7. Applicant's arguments filed 7 December 2007 with respect to the rejection of claim 12 under 35 U.S.C. 112, second paragraph, have been fully considered and are persuasive. The rejection of claim 12 under 35 U.S.C. 112, second paragraph, has been withdrawn.

8. Applicant's arguments filed 7 December 2007 with respect to the rejection of claims 1-8 under 35 U.S.C. 102(b) citing Lenhardt ('994) have been fully considered and are not persuasive. Applicant contends that Lenhardt does not disclose a bone conducting hearing apparatus arranged to be attached to a skull bone of a user with stuttering problems so that an ear canal of the user is left free, the hearing aid configured to receive sound and carry out signal processing on the sound to amplify and feed back to the user a voice of the user and not amplify and feed back to the user

sound from surrounding sources and a tactile component comprising a vibrator from which processed sound is mechanically transmitted to both ears. However, this argument is not persuasive. The new rejection presented above regarding claim 1 reflects the amendments to the claim. However, to address the arguments, Lendhardt indeed teaches a hearing aid **11** having a bone conduction attachment (“skin penetrating member”) **12** which can be embedded in the skull (temporal bone) via a screw or simply attached to the head with a clamping arrangement or headband (col. 3, lines 39-52 and col. 5, lines 26-33). A vibrator of the hearing aid applies vibrations to the skull for bone conduction at varying frequencies (col. 3, lines 39-52). Frequencies that are critical for noise detection, such as a “user’s voice” may be preferentially amplified (col. 4, lines 34-38), and signal processing by the aid may include filters to reduce surrounding sounds (col. 5, lines 5-14) thus relieving problems associated with stuttering. Thus, specific frequencies are amplified and filtered in order to transmit to the user those sounds which are necessary to detect by the user and reduce or remove those noises deemed “ambient” by Applicant. Furthermore, the limitation of “a user with a stuttering problem” constitutes intended use, and a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. The device of Lenhardt meets the structural limitations of the claims as presented above. In view of the foregoing, the rejection of claims 1-5, 7-8 and 11 under 35 U.S.C. 102(b) citing Lenhardt (‘994) has been maintained.

9. Applicant's arguments filed 7 December 2007 with respect to the rejection of claims 9 and 10 under 35 U.S.C. 103(a) as being unpatentable over Lenhardt ('994) in view of Rastatter ('443) have been fully considered and are not persuasive. Applicant argues that the combination of Lenhardt and Rastatter does not disclose the present invention, which appears to be contingent upon the rejection regarding claim 1, see rejection and arguments supra. In view of the foregoing, the rejection of claims 9 and 10 under 35 U.S.C. 103(a) as being unpatentable over Lenhardt ('994) in view of Rastatter ('443) has been maintained.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTINE D. HOPKINS whose telephone number is (571)272-9058. The examiner can normally be reached on Monday-Friday, 7 a.m.-3:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor, II can be reached on (571) 272-4730. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

Art Unit: 3735

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. D. H./
Christine D Hopkins
Examiner
Art Unit 3735

/Charles A. Marmor, II/
Supervisory Patent Examiner
Art Unit 3735